

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given by Christian Bartels on 03/03/2011.

The application has been amended as follows:

Please replace claim 1 with the following:

1. A method for sampling a state space of a system with states  $x$  and a probability density  $p(x)$  indicating the probability for the system to be in state  $x$  by iteratively generating states  $x_{i,t}$  and their weighting factors  $p_{i,t}$ , wherein the index  $i$  is the iteration parameter and the index  $t$  distinguishes different states  $x_{i,t}$  generated by an iteration  $i$ , the method comprising:

sampling the state space of the system and performing,

a first step for selecting an initial sampling distribution function  $p_i(x)$ ,  
to execute an iteration procedure including:

a second step for generating  $N_j$  states  $x_{j,t}$  by a numerical sampling algorithm,

a third step determining weighting factors  $\rho_{i,t}$  for states  $x_{i,t}$  generated so far by using sampling distribution functions  $\rho_i(x)$  determined so far,

a fitting step for determining a sampling distribution function  $\rho_j(x)$  for the next iteration by fitting  $\rho_j(x)$  to  $\rho_{i,t}O(x_{i,t})$  for states  $x_{i,t}$  generated so far, wherein  $O(x_{i,t})$  is a function, respectively a property of the states  $x_{i,t}$ ,

identifying a desired property in the state space of the system based on sampled state space, and

a fourth step for testing at least one criterion to decide whether to continue the iteration procedure or to stop the iteration procedure and to go to a fifth step for performing an analysis using simulated data.

12. A computer readable storage medium encoded with a computer program including instructions for sampling a state space by iteratively generating states  $x_{i,t}$  and their weighting factors  $\rho_{i,t}$ , wherein the index  $i$  is the iteration parameter and the index  $t$  distinguishes different states  $x_{i,t}$  generated by an iteration  $i$ , which instructions, when read by a computer enable the computer to:

select an initial sampling distribution function  $\rho_i(x)$ ,

to execute an iteration procedure including:

generating  $N_j$  states  $x_{j,t}$  by a numerical sampling algorithm,

determining weighting factors  $\rho_{i,t}$  for states  $x_{i,t}$  generated so far by using sampling distribution functions  $\rho_i(x)$  determined so far,

a fitting step for determining a sampling distribution function  $\rho_j(x)$  for the next iteration by fitting  $\rho_j(x)$  to  $\rho_{i,t}O(x_{i,t})$  for states  $x_{i,t}$  generated so far, wherein  $O(x_{i,t})$  is a function, respectively a property of the states  $x_{i,t}$ ,

identifying a desired property in the state space of the system based on sampled state space, and

testing at least one criterion to decide whether to continue the iteration procedure or to stop the iteration procedure and to perform an analysis procedure using simulated data.

In claim 18, line 1, **insert** "storage" **after** "computer-readable"

Cancel claim 19

Cancel claim 20

## REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or suggest a fitting step for determining a sampling distribution function  $p_j(x)$  for the next iteration by fitting  $p_j(x)$  to  $p_{i,t}O(x_{i,t})$  for states  $x_{i,t}$  generated so far, wherein  $O(x_{i,t})$  is a function, respectively a property of the states  $x_{i,t}$ ,

identifying a desired property in the state space of the system based on sampled state space, and

testing at least one criterion to decide whether to continue the iteration procedure or to stop the iteration procedure and to go to a fifth step for performing an analysis in order to perform the analysis using simulated data; as recited in independent claims 1 and 12.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Mon-Fri 9 a.m.-5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./  
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./  
Supervisory Patent Examiner, Art Unit 2193